

AMENDMENTS TO THE CLAIMS

1. (Presently Amended) An oral phototherapy ~~applicator~~ apparatus comprising
a body sized and shaped so as to fit at least partially in a user's mouth and adapted to
conform to the shape of at least a portion of the oral cavity, and
at least one radiation emitter coupled to the body to irradiate a portion of the oral cavity
with phototherapeutic radiation; and
at least one thermally conductive element configured to extract heat from the emitter.
2. (Original) The apparatus of claim 1 wherein the emitter further comprises at least one source
of radiation having wavelength components in at least two separate spectral bands.
3. (Original) The apparatus of claim 1 wherein the emitter further comprises at least two
sources of radiation emitting different spectral bands of radiation.
4. (Original) The apparatus of claim 1 wherein the emitter further comprises at least one
radiation source selected from the group of light-emitting diodes, superluminescent diodes, laser
diodes, vertical cavity surface emitting lasers, fiber lasers, fluorescent solid-state sources, and
lamps.
5. (Original) The apparatus of claim 1 wherein the apparatus further comprises a controller for
controlling at least one parameter for irradiation of the oral cavity selected from the group of
wavelength, power, pulsewidth and treatment time.
6. (Original) The apparatus of claim 1 wherein the apparatus further comprises an optical
element for directing radiation in different directions.
7. (Original) The apparatus of claim 6 wherein the apparatus is configured to direct radiation to
at least one portion of the oral cavity selected from the group of a tooth, cheek, tongue, palate,
throat and facial tissue, lymphatic tissue, blood, gland, follicle, collagen and pigmentation.

8. (Original) The apparatus of claim 1 wherein the apparatus further comprises an optical filter for selecting a spectral band of radiation for use in phototherapy.

9. (Original) The apparatus of claim 1 wherein the apparatus further comprises a contact sensor and controller which controls the radiation emitter based on signals from the contact sensor.

10. (Original) The apparatus of claim 1 wherein the apparatus further comprises an diagnostic sensor and controller which controls the radiation emitter based on signals from the diagnostic sensor.

11. (Cancelled)

12. (Presently Amended) The apparatus of ~~claim 11~~ claim 1 wherein the thermally conductive element comprises a fluid heat transfer medium.

13. (Presently Amended) The apparatus of ~~claim 11~~ claim 1 wherein the apparatus further comprises a handle that serves as a heat sink.

14. (Presently Amended) The apparatus of ~~claim 11~~ claim 1 wherein the thermally conductive element comprises a phase change material.

15. (Presently Amended) The apparatus of ~~claim 11~~ claim 1 wherein the apparatus further comprises a heat transfer element for heating a portion of the oral cavity with waste heat from the apparatus.

16. (Presently Amended) The apparatus of claim 1 wherein the apparatus further comprises a light diffuser optically coupled to the ~~radiation emitting element~~ at least one radiation emitter to deliver diffuse radiation to the oral cavity.

17. (Original) The apparatus of claim 1 wherein the apparatus further comprises an airway lumen passing through the applicator body to facilitate breathing by the user during a procedure.

18. (Original) The apparatus of claim 1 wherein the body is compliant to facilitate conformation to a portion of the oral cavity.

19. (Original) The apparatus of claim 1 wherein apparatus further comprises a body in the form of a mouthpiece adapted for positioning between at least a user's teeth and gums during phototherapy.

20. (Original) The apparatus of claim 1 wherein the apparatus further comprises a body adapted for placement in a position covering at least a portion of a user's tongue during phototherapy.

21. (Original) The apparatus of claim 1 wherein the apparatus further comprises a body adapted for placement in a fixed position relative to the oral cavity during phototherapy.

22. (Presently Amended) The apparatus of claim 1 wherein the apparatus is configured such that, upon disposition of the applicator within the mouth, radiation from the emitter can penetrate the ~~mucosal~~ mucosal lining of the oral cavity and deliver phototherapeutic energy to a region of facial tissue.

23. (Original) The apparatus of claim 1 wherein the apparatus further comprises an ultrasound generator for delivering acoustic energy to a target tissue site.

24. (Original) The apparatus of claim 1 wherein the apparatus further comprises a vibrating element for applying intermittent pressure to a target tissue site.

25. (Original) The apparatus of claim 1 wherein the apparatus further comprises a drug delivery port.

26. (Original) The apparatus of claim 1 wherein the apparatus further comprises an energy reflector for redirecting phototherapeutic radiation towards a target tissue site.